December 1979

Using Extension Methodology in Prairie Dog Management

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At the turn of the century, Texas' 'black-tailed prairie dog was probably the State's most abundant wildlife species. Bailey estimated the population at 800,000,000 animals in 1905. He also described a single colony that was 100 miles wide and 250 miles long, from San Angelo, Texas to Clarendon, Texas. During this period, other authors described riding 'by horseback for several days through a single colony. Settlers' of this area, wishing to raise cattle, had to first control the prairie dog. My good friend, G. IJ. "Shorty" Kennedy, a retired ranch foreman and an octgenarian, described these historical control methods to me.

The ranchers had one or more "poison crews" that consisted of a chuckwagon, a "poison wagon" and as many as a dozen men/crew that camped in the prairie dog "town", usually for several months. They moved campinggroundsperiodically, as the team progressed through the colony. The colony's

burrows were treated by tossing "some" strychnine milo maize upon the mound, without any prebaiting. The milo was distributed by cowboys on horseback from a grainsack that they carried, while the “poison wagon" kept pace with the crew. They worked systematically through the colony that, at that point in time, may have been measured in sections. Some of those historical colonies that "Shorty" helped in treating measured 20 or 30 or more sections in area.

Today, most colonies are measured in acres. We probably have more colonies than that earlier period, 'but much, much less acreage and we have a management plan for this species. Our management program contains an objective of damage reduction without impacting the State's population or non-target animals, a policy tied to demonstrated need, and an inventory for the first time (Cheatheam, 1977).

Texas' black-tailed prairie dog population inventory was completed in 1977 finding 1,336 colonies inhabiting 89,955 acres in 89 western counties of the State. The majority of this population is north and west of A'bilene, Texas. This area encompasses most of the State's High Plains and

Rolling Plains and contains about 1,160 colonies that inhabit 77,521 acres of rangeland or about 1 colony acre/67 acres of rangeland.

The total impact of this population upon Texas' rangeland would be difficult to ascertain monetarily 'because of variations in climate, soils, vegetative composition, range condition, land slope, burrow density and many otherfactors. But as a generality, it may be said that the area inhabited 'by prairie dogs represents an area of lost grazing potential for cattle. The prairie dogis a direct competitor with cattle for forage and its means of burrow construction brings subterranean soil to the surface that is deposited upon vegetation. These sometimes very large mounds represent not only covered forage, 'but in the area described, this subterranean soil is lime-bearing and takes years to revegetate 'by natural processes. To the landowner, a prairie dog colony may represent nothing more than a highly visible and tangible monetary loss that is proportional to the colony's acreage.

It is important that the damage control specialist inform and attempt to broaden the landowner's perspective that

the prairie dog colony also represents a minature, but unique ecological entity of the Great Plains. Also, that its vacant burrows provide harborage or other requirements to 'burrowing owls (Speotyto cunicularia), ground squirrels (Citellus sp.), cotton tailed rabbits (Sylvilagus sp.), and other mammals, reptiles, and insects. But, 'because of the prairie dogs habits and abundance, it sometimes requires a colony's population reduction to reduce damage, but it also deserves concurrent management to preserve it as a species.

Publicity of Texas' extension prairie dog control program and biology of the species may 'be presented in an informational form through the various news media, 'by slide-talk programs to service clubs and conservation groups, or personal contact with agricultural agencies and especially through the local County Extension Agent.

The control of any individual colony is always intiated by request from the landowner who signs a legal agreement for the work. Most requests for control are justifiable: the colony is large and an obvious economical loss of grazingpotential; the colony borders agricultural crops

and portions of the crop are being cut by prairie dogs for visibility purposes. Owners of large ranches are not encouraged in the extirpation of small colonies containing only a few burrows or acres. Other owners may only wish to reduce the population and maintain a small viable colony. These individuals can mark the desired colony perimeter and annually treat those 'burrows outside the marked area.

The treatment of any colony is always preceded 'by on-site inspections for sign of the 'black-footed ferret (Mustela nigripes). These inspections include interviews with the landowner about ferret sightings and the tabulation of 'burrowing owls and eagles (Aquila sp.) near the colony. Historically, the ferret in Texas was a marginal species. Only 3 skin or skull specimens were ever collected in the State. These were taken from 1886-1905 and now are in the U. S. National Museum (D. Sweptson, Tex. Parks and Wildlife Dept., pers. comm. Aug. 1976). It should be noted that 2 of these specimens were collected about 75 miles outside the prairie dog range in Texas at that time (Bailey, 1905). Current sightings of the ferret in Texas continue to be reported and each sighting is checked,

'but none have 'been authenticated.

After the ferret inspection, the colony is prebaited with untreated steam-rolled oats. The consumption is dailymonitored, and when most of the prebait is eaten, 2 percent zinc phosphide treated oats are applied at the rate of 4 grams/burrow. Prebaiting is a means of changing the prairie dog's diet from grass and grass roots to grain, which seems to 'be more preferable in the early fall, and does encourage feeding upon the toxicgrain, or in effect, prebaiting produces a conditioned response in the prairie dog's feeding 'behavior. This technique is effective and may result in up to 95 percent control.

The rate of application, the toxicant and its carrier evolved by steps using field and lab research techniques at Denver Wildlife Research Center (Tietjen, 1976). Translocation of the toxicant into range vegetation and the toxicant's effect upon non-target species was found to be negligible.

The treated bait is only available from USF&WS Pocatello,

Idaho and, following labeling requirements, must be applied by or under the supervision of government personnel trained in mammal control. In Texas, we also require the landowner to supply personnel to apply the prebait and treated bait while at least one licensed damage control specialist is present to coordinate, supervise, and assist in the operation. This requirement may reduce participation in the program, but it provides some assurance that economic losses exist and assures genuine interest of the landowner in reducing the colony's population. The licensed government employee at the scene can provide current information on techniques and assure compliance with our policies and regulations.

Those of us in ADC Extension Service provide assistance and information so that people can make objective judgements regarding wildlife problems. We must consistently upgrade our progessional competency and develop biologically sound management programs to meet the needs of the public. The early ranchers means of prairie dog control is in considerable contrast to our present program. Texas' prairie dog control program has been modified over the

years for biological reasons and has evolved into the described outline. In the field, the program is entirely feasible for the cooperators, it is an economical program for the taxpaying public, and has proven ecologically safe without impacting other species.

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